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APPLICANT : TOKAI CARBON CO LTD;

INVENTOR : TAKIZAWA YASUHIRO;

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TITLE : MANUFACTURE OF SEPARATOR MEMBER FOR SOLID POLYMER FUEL CELL

ABSTRACT : PROBLEM TO BE SOLVED: To realize a manufacturing method for a member which is suitable for the separator of a solid polymer fuel cell high in material isotropy, is small especially in electrical resistivity and anisotropy, and is superior in gas impermeability.

SOLUTION: This separator member is manufactured which includes the steps of a kneaded mixture being prepared by mixing 80-95 wt.% flake such as natural graphite powders or expanded graphite powders with 20-5 wt.% thermosetting resin containing not less than 65% nonvolatile matter, the kneaded mixture is granulated, the granulated pellets of 10-1,000 μm diameters are filled in a forming container, the container is decompressed and deaerated, the granulated pellets in the container are isotropically pressure-molded, the molded body is machined to have a prescribed shape and then is thermally cured at a temperature of 150-280°C. Alternatively, the molded body is thermally curbed at a temperature of 150-280°C and then is machined to have the prescribed shape. Preferably, surface-treated flake-like natural graphite powders or expanded graphite powders are used, and the porosity of the granulated pellet is regulated to be not less than 5%.

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